This record is a partial extract of the original cable. The full text of the original cable is not available.

120926Z Dec 05

UNCLAS SECTION 01 OF 02 AMMAN 009562

SIPDIS

PARIS PASS UNESCO

E.O. 12958: N/A
TAGS: TPHY XF JO
SUBJECT: SESAME Synchrotron: Middle East Sees the Light

¶1. Summary: SESAME (Synchrotron Light for Experimental Science and Applications in the Middle East), an international project to operate the first synchrotron in the Arab world, met in Amman on December 5-7 to assess progress, plan a strategy, and attract potential users. SESAME will upgrade a retired German synchrotron and install it in Jordan. (The synchrotron is a "light source," a next-generation x-ray machine that can peer down to the molecular level.) The synchrotron's wide range of applications makes it a valuable tool for practical industrial and scientific research. Many countries participate in SESAME, which needs to raise $20-25 million to become operational. End summary.

Background: Genesis in 1997 - UNESCO Support - Jordan Base

¶2. SESAME is the brainchild of Stanford University physicist Herman Winick, German physicist Herwig Schopper, and Gustaf-Adolf Voss. In 1997, Winick, Schopper, and Voss had the idea of donating Germany's retired BESSY I synchrotron to an Arab country. Jordan's King Abdullah II was an early and enthusiastic supporter, so SESAME found a home in Jordan at Al-Balqa Applied University in Salt. SESAME was originally formed on an interim basis in 1999, and was formally reconstituted in 2003 as an independent international organization under the auspices of UNESCO.

"Wheels of SESAME Are Turning Faster Every Day"

¶3. Beyond the German donation of the retired machine core and Jordan's contributions for the building, SESAME has gathered $4 million to date, but still needs about $20-25 million for the project be become fully operational. While the heart of the machine was donated by Germany, the stations along the "ring" of the synchrotron remain to be purchased at $2.5 - $3 million apiece. SESAME's Scientific Committee plans to have six stations or "beamlines" ready at start-up in 2009. Other equipment needed to upgrade the machine to current standards also remains to be funded, but the result will be a world class machine according to Stanford professor Winick.

¶4. 2006 will be a critical year, according to SESAME Center President and Jordanian Minister of Education and Higher Education Khaled Toukan. At the December 5-7 conclave, Toukan noted that "the wheels of SESAME are turning faster every day," and that optimism about, and interest in SESAME are growing as the project approaches reality. Toukan, with a PhD in physics from MIT, is a key player in SESAME; in his former role as President of Al-Balqa University, he arranged for the SESAME site and lobbied for Jordanian funding.

USG Supports; Jordan Chipping inSerious Funds

¶5. Through the Department of Energy (DOE) and State, the USG has been a consistent supporter of SESAME, including paying for several Iraqi students to attend the SESAME users meeting on December 6-7 in Amman. Jordan has been the biggest supporter by far, though. The GoJ has poured several million dollars into SESAME's building, which is being custom-built to world-class standards, including a single-slab, 9-foot thick foundation. For its part, the EU has been slowly moving towards a 12 million Euro contribution. SESAME President Schopper has obtained the signatures of 28 Nobel Prize winners on a letter supporting SESAME, and intends to use it as a marketing tool to solicit further funding. Much support is in-kind; IAEA announced in Amman that it is prepared to provide 40 man-months of training annually for the next three years.

Building Ready in 2006

¶6. SESAME's building will be completed in summer 2006, and the machine itself is scheduled to start operating in 2009, but definitive timing depends on availability of funding. SESAME already has hired some staff, and will hire additional personnel in 2006, although much of the heavy scientific lifting is still done on a volunteer basis. The

machine itself is sitting disassembled in a warehouse in Amman until the building is ready.

Strong Member Support, Large User Base

¶7. SESAME is "past the point of no return," said SESAME President Schopper, who said that SESAME enjoys both strong member support and a broad user base, both key to sustainable operations, which are likely to cost $3-4 million per year. SESAME will be run by a council of representatives whose governments have officially joined SESAME: Bahrain, Egypt, Iran, Israel, Jordan, Pakistan, the Palestinian Authority, Turkey, and the United Arab Emirates (UAE). Observer countries include Germany, Greece, Italy, Kuwait, Russia, Sweden, the UK, and the United States. Cyprus will join soon, and Morocco is likely to join, said SESAME President Schopper.

¶8. Comment: The SESAME synchrotron appears to be on its way to gaining the support it needs to become operational, and to serving as a unique pillar of science and industrial research in a region where those fields are lagging.

HALE